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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,568

02/08/2006

Kazuto Kobayashi

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WASHINGTON, DC 20037-3213

EXAMINER

AFZALI, SARANG

ART UNIT

PAPER NUMBER

3726

MAIL DATE

DELIVERY MODE

10/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,568	Applicant(s) KOBAYASHI ET AL.	
	Examiner SARANG AFZALI	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 6-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 4 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060208</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1 and 3-5 in the reply filed on 8/7/2008 is acknowledged.

Drawings

2. Figures 16A to 16I should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Specification, page 5, line 8, the phrase "18D" should read - - 16D - -.

Specification, page 7, line 22, the phrase "Figs. 16A" should read - - Figs. 16A to 16I - -.

Appropriate correction is required.

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4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: METHOD OF MANUFACTURING A RETAINER FOR A ROLLER BEARING.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson (US 3,240,543) in view of Fernstrom (US 1,602,350).

As applied to claim 1, Benson teaches a method of manufacturing a retainer for a roller bearing which is made of a metal plate and has a tubular main portion, a plurality of pockets formed in the main portion intermittently concerning a circumferential direction and capable of retaining rollers rollably on respective inner sides thereof, and an outwardly oriented flange-like collar portion formed at an axial end of the main portion, comprising the steps of:

forming an annular intermediate material (29, Fig. 7) from a sheet metal plate (col. 1, lines 47);

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forming a second intermediate material by forming a plurality of through holes (32, Fig. 8) in the intermediate material intermittently concerning the circumferential direction;

plastically deforming a portion of the second intermediate material excluding a radially outer end portion thereof into a tubular shape (crown portion 22 with sloping portions 23 & 24, Fig. 10);

and forming the portion plastically deformed into the tubular shape as the main portion (crown portion 22 with sloping portions 23 & 24, Fig. 10), forming a portion corresponding to the radially outer end portion of the second intermediate material as the collar portion or a collar portion element for forming the collar portion (lip 15, Fig. 10), and forming portions corresponding to the through holes as the pockets (17, Fig. 9).

However, Benson does not explicitly teach the step of die cutting a metal plate to form an annular intermediate material.

Fernstrom teaches that it is well known in the art to subject a metal plate /sheet to a die cutting step in order to form an annular blank used as the blank for the retainer (Fig. 1, page 1, lines 3-5 and 40).

It would have been obvious to one of ordinary skill in the art at the time of invention to have subjected the sheet metal of Benson to a die cutting step as taught by Fernstrom in order to provide a suitable means of forming an annular metal blank from a stock blank.

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As applied to claim 3, Benson/Fernstrom teach the invention cited. Benson further teaches the method, wherein portions (lip 14, Figs. 2 & 4) which are each present between a central hole (30, Figs. 9 & 10) of the second intermediate material and each of the through holes (32) are each formed in an arch shape in which a respective intermediate portion projects in a radial direction of the second intermediate material relative to both end portions, and the arch-like portion is extended when the portion of the second intermediate material excluding the radially outer end portion (lip 15) thereof is plastically deformed into the tubular shape.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benson in view of Fernstrom as applied to claim 1 above, and further in view of Pottiez (DE 4140161 A1).

As applied to claim 4, Benson/Fernstrom teach the invention cited with the exception of explicitly teaching the step wherein a portion of an outer peripheral edge of the intermediate material is left as connected to a portion of the metal plate when the annular intermediate material is formed by subjecting the metal plate to die cutting, and that after the second intermediate material is formed by forming the plurality of through holes at least in the intermediate material, a portion of an outer peripheral edge of the second intermediate material is cut off from the portion of the metal plate.

However, Pottiez teaches a method of die cutting/stamping an intermediate material from a sheet strip to be used as a bearing retainer wherein the outer peripheral edge (22, fig. 1) of an intermediate material (11, Fig. 1) is left as connected to a portion

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of the sheet material strip (10, Fig. 1) when the annular intermediate is formed by stamping and that after the second intermediate material (finished stamping 12, Fig. 1) is formed, the outer peripheral edge (22, fig. 1) of the second intermediate material is cut off from the portion of the sheet metal strip.

It would have been obvious to one of ordinary skill in the art at the time of invention to have provided a connecting portion between the outer peripheral edge of the intermediate material and sheet metal strip followed by cutting off the connecting portion following the forming of the second intermediate material of Benson/Fernstrom as taught by Pottiez in order to provide an effective means of securely holding the workpiece until the end of the final die cutting/stamping step.

Allowable Subject Matter

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art fail to teach or fairly suggest the step wherein after the formation of the main portion and the plurality of pockets, the portions of the main portion corresponding to portions between a central hole of the second intermediate material and each of the through holes, which have been subjected to

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plastic working, has a plate thickness greater than the plate thickness of a remaining portion of the main portion.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARANG AFZALI whose telephone number is (571)272-8412. The examiner can normally be reached on 7:00-3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarang Afzali/
Examiner, Art Unit 3726
9/30/2008

/DAVID P. BRYANT/
Supervisory Patent Examiner, Art Unit 3726